1: Bowen-Jones et al. K-5 (1955-1958) 1961
EZ6 Malta EZ6

234 654 *lal-Halib'*. These bodies have introduced some constant elements into an otherwise chaotic situation but this has also implied a certain rigidity. Sonce the costs of milk production are not accurately known and the costs to the National Economy are ignored one now has an artificial market with artificial prices which must be maintained to prevent economic disaster on the farms. (For such information on production and marketing as is available, the reader is further referred to Chapters X D and X E.)

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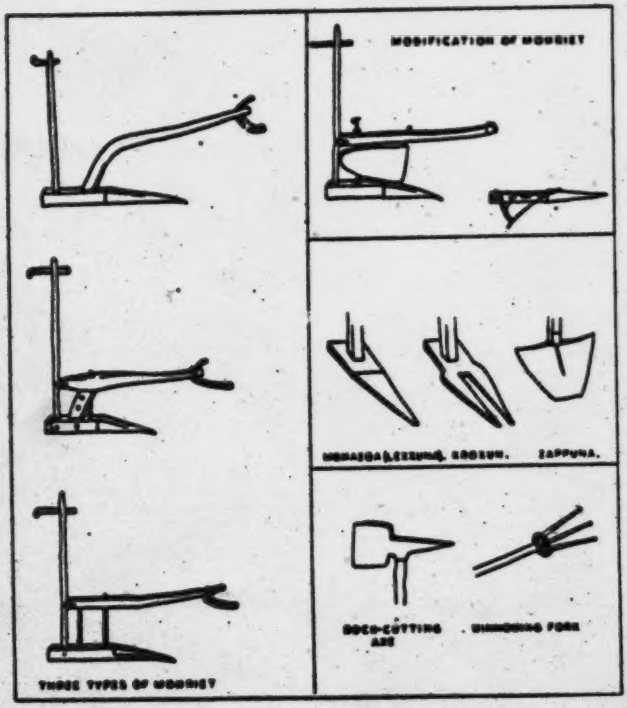

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Fig. 140 Cultivation Equipment.

1: Bowen-Jones et al. K-5 (1955-1958) 1961
EZ6 Malta EZ6

B. Cultivation Equipment and Tillage

Of the implements observed in Malta, the traditional types of plough, hoe, sickle and harrow are of the same genera as those to be generally found in the Mediterranean region (Fig. 140).

Ploughs are of the *Aratrum* or *Ard* type, steel tipped wooden wedges, devoid of cutting edges and having very restricted powers of furrow making or inversion - *mukrich*. None of those observed had lateral 'ears' or 'wings' but apparently ards thus equipped are occasionally used. There are various sub-types with differing arrangements of beam, body and handle but no constant rational relationship between these sub-types and local environments could be observed. Prices range upwards of £4 10s. 0d. Iron or steel tips for the body cost about £1. One interesting modification of the plough is manufactured at Zurrieq. On top of the basic beam and body is fitted a movable double mouldboard of which either or both breasts can be brought into operation at any one time. Ridging and left and right furrow inversion are therefore made possible. For those areas where furrow inversion is practicable such a cheap, light multi-purpose implement would be very valuable, and the development of such improvements might well be encouraged by official approbation.

Hoes are manufactured in four main types. The heavy spade type, the *Xappuna*, is generally used for soil trenching in preparation for manuring. The effort involved tends to restrict its use. The small, single tined, wedge-shaped hoe, the *Mghazqa* or *Lexxuna*, is a general purpose implement that is replaced under damp and cohesive soil conditions by a forked, two-tined variety, the *Krazun*. A three-tined hoe is often used, together with the ard, for potato lifting. In general, each cultivator possesses a selection of different types of hoe, necessitated by the variety of manual operations he usually has to perform and made possible by the reasonable prices of the implements (prices range from about 10s. for the single-tine, to 18s. to £1 for the spade hoe).

The sickle in general use is a small, smooth-edged type costing about 12s. 6d. The small number of sickle types observed may result from the widespread practice of pulling rather than cutting green fodder. Traditional harrows are almost invariably of the Mediterranean and Asiatic type, harrows cum levellers and seed coverers. Those observed were triangular and stone weighted. When manufactured for the purpose they were usually constructed of ash and had removable tines. Without metal tines, the cost is about 30s.

These implements, of which illustrated examples are given (Fig.140), have already to some extent been displaced by imported newer types. Most farmers who possess fields which are at all accessible to tractors now periodically hire contractors to plough the land with mouldboard or disc ploughs and even, in some areas, with deep digger-ploughs. Where plots are small or the terrain difficult, then rotary cultivators are hired or purchased. These latter machines, in spite of their relatively high cost - usually over £200 in Malta - are amazingly popular and are more and more replacing the *ard* and the hoe. The reasons for, and implications of this popularity are examined below.

The spade proper is hardly ever used, and its absence is associated with the reasons for the survival of the *ard* plough. Small, light, flexible, metal harrows are to be found. Entirely imported, their only advantages are their flexibility on rough ground and ease of draught. They are, on the other hand, more easily damaged and more difficult to repair than their wooden prototypes. Other equipment includes a great range of fixed and movable adjuncts to farming, all but one class of which are constructed rurally from local materials. The exceptional group is that connected with irrigation and includes windpumps and small diesel engines. Threshing and winnowing, traditional style, needs no more than a rock or *lorba* (beaten earth) floor and asses or horses for trampling, baskets constructed of local cane, and simple wooden winnowing forks. Of recent years, centralised threshing by contractors' machines has almost entirely displaced the older method in all but the more remote western regions. Canes, grown in slightly marshy conditions in wied floors, provide the raw material for wind breaks, covered forcing beds, crop supports, etc.

*159 443 fluctuation. In such a situation he would find fixed annual repayments on loans for development much more difficult to meet.

SUMMARY OF CASE II

*159 (A goats milk producer with subsidiary cash-cropping).

A. Land.

[423] [427] Rents 10 separate plots, all dry land, in the Qawra Region.
Several landlords: total rent including house (£8.10.0) £35 p.a.

B. Utilisation.

[241] [311]
- Attention devoted mainly to fodders: wheat, barley, sulla.
- Grapes, some tomatoes and a few potatoes for sale.
- Various vegetables for home consumption.
- Grazing on waste and abandoned land.

[231] C. Livestock.
- About 25 goats: 2 rams and 23 milkers all over 2 yrs. old.
- 20 hens, 5 pigs, 1 mule.

D. Capital.

[423] [454] [412] [407] [426] [427]
(i) No freehold land.
(ii) Little or no liquid reserve.
(iii) Equipment: usual hand implements; no mechanical equipment until 1957 when he bought a rotary cultivator at £350 with a government loan to be repaid at £62 p.a.
- Hires tractor and plow at 15 to 25/- per tomna.
- Borrows spray from brother.

E. Labour. (v. Table 4: Analysis of Work Record, 1957-58)

[464]
- No permanent hired labour.
- Help from wife and children (8 children, all below 14 yrs. of age, 4 at school).
- Employs a vine-grafter at 25/- a day when necessary (150 vines can be grafted in one day).
- Pays friends and relatives £1 daily for help at grape harvest.

F. Production and Sales.

[234] [43] [231]
(i) 22 goats (Nov. 1957) yield 3 gallons of milk daily which sells at 16/9 (5/7 per gall.).
- Keeps only milkers as no accommodation for rearing.
- Female kids sold for breeding fetch 7/- each, male kids sold to butchers when 15 days old fetch same price.
- Buys 3 to 5 goats annually to maintain herd - price in 1957 £10 each.
- 5 pigs includes 3 for meat, 2 for breeding; piglets weaned after 40 days and sold a week later.

[245] [434] [244]
(ii) Vine shoots bought from Govt. Farm at 28/- per 100. Grapes sold to vintners. Price takes no account of quality.
- In 1957 sold 30 qantar at 44/- per qantar = £66.
- Tomatoes, small quantities sold, but bulk of crop made into paste for home use.

G. Husbandry.

[245] (i)
- Much effort expended on vines. Pruned in January, when 2 yr. old shoots cut back.
- Grafting in February; new grafts produce small crop the same year.
- Sprayed, plowed (3 or 4 times) in May.

*159 443 484 521 Shopping is done in the local village but Nardu makes the journey to Valletta for the 'Fuq il-Monti' Sunday market occasionally, though with the intention of gossipping rather than making purchases.

CASE III : Summary

(A goats' milk producer.)

*159 423 A. **Land.**

30 Tmien in Naxxar-Gharghur Hills area.
14 Field plots in two main groups;
All on soils of tad-Dawl and l-Iklin Complexes.
Of this - 5½ tmien freehold,
- 24½ tmien leased from 6 landlords.
Rents range between 10/- and £1 per tomna.

*159 241 311 B. **Utilisation.**

Almost entirely fodder production e.g. February 195
3 plots under widna.
1 plot under barley - pulled green.
3 half plots under wheat.
2 half plots under sulla.
1 plot used for goat grazing - fallow.
1 plot under ʒofʒfa. (bitter vetch).
1 enclosure under prickly pear.
3 plots under vetches.
Remainder subdivided and carrying potatoes, broad beans and a few vegetables.
[434] Only regular cash crop - winter potatoes.

*159 231 C. **Livestock.**

During 1957/1958 goat numbers ranged from 35 to 50 and milkers from 27 to 40.
5 sheep kept for wool and sheeps milk for cheese-making.
1 mule - imported from Tunis.

*159 [423] [454] [412] [407] D. **Capital.**

- Land held in freehold valued at £400 in early 50's.
- Freehold village house.
- According to his own statement liquid reserves of £200.
- Equipment - hand tools, local wooden plows, etc. No machinery but plans to buy rotary cultivator.

*159 464 E. **Labour.**

- Wife spends c.30% of her time on the land, although childrens ages range from 3-8.
- Communal help for threshing.
- Hires labour for barley and sulla cutting. During 1957 c.18 man days at cost of c.£15.
- [427] Every 4th year deep plowing (by contract) of about half the fields. Cost £1 to 15/- a tomna.
- Each year has some land tilled by rotary cultivator. Cost 12/- a tomna.

*159 433 F. **Production and Sales.**

- Goats milk sales range from February minimum of c.45 lbs. per day to May-August maximum of c.70 lbs. per day.
- Winter potatoes as cash crop vary considerably in yield and in selling price.
- Occasional sales of small quantities wheat and wool
- Produce consumed by family valued at c.£1 per week.

*159 241 G. **Husbandry.**

(i) Land - All dung used on fields - usually before potato setting.
- 7-8 bags of sulphate of ammonia applied annual
- The concentration on leguminous fodders prove the employment of the normal four-year rotat